

REMARKS

This application has been amended in a manner that is believed to place it in condition for allowance at the time of the next Official Action.

Claims 53-77 are pending in the present application. Support for claims 53-77 may be found generally throughout the specification and in the original claims. Claims 1-52 have been canceled. Indeed, while applicants note that the outstanding Official Action indicated that claims 25-48 are pending in the present application, applicants note that the preliminary amendment filed with the present application canceled claims 1-28 and added new claims 29-52. Therefore, applicants believe that the new claims should start at claim 53.

In the outstanding Official Action, claims 25-36 and 48 were rejected under 35 USC 112, first paragraph, for allegedly not satisfying the written description requirement. Applicants believe the present amendment obviates this rejection.

Upon reviewing new claims 53-77, applicants believe that the present disclosure describes a representative number of species falling within the scope of the claimed invention. In particular, the Examiner's attention is respectfully directed to independent claim 53, which recites a method of modulating in the plant cell the level(s) of one or more terpenoid indole alkaloids (TIAs), and/or of modulating the expression of one or more genes responsible for the biosynthesis of a TIA or a precursor thereof.

The method itself recites a step of providing to the cell an AP2-domain transcription factor that is jasmonate responsive and comprises at least one AP2-domain having an amino acid sequence with at least 80% amino acid identify with SEQ ID NO:6.

Dependent claims further characterize the TIAs (claim 58) and the species of the plant cell (claims 63-65). The AP2-domain comprises SEQ ID NO:6 (claims 72-76). As to new claim 77, claim 77 is dependent on claim 53 and further characterizes the genetic construct, the AP2-domain itself, the species of the plant cell, and the type of TIA. Support for these claims can be found throughout the description and in particular on page 2, line 23 for the recited TIAs and on page 8, lines 20-25 for the recitations directed to the recited AP2-domain transcription factor and nucleotide sequences. Support for the recitations directed to the plant species may be found in the present specification at page 38, lines 1-10.

Thus, in view of the above, applicants believe that the present application describes a representative number of species falling within the scope of claims 53-77. As a result, applicants respectfully request that the rejection be withdrawn.

Claims 25-36 and 48 were rejected under 35 USC 112, first paragraph, for allegedly not satisfying the enablement requirement. Applicants believe the present amendment obviates this rejection.

Moreover, the Examiner is respectfully reminded that it is a well founded principle that any assertion by the Patent Office that the enabling disclosure is not commensurate in scope with the protection sought must be supported by evidence or reasoning substantiating the doubt so expressed.

As a matter of law, the expressed teaching of the patent specification cannot be controverted by mere speculation and unsupported assertions on the part of the Patent Office. As stated by the Court of Customs and Patent Appeals in the case of *In re Dinh-Nguyen and Stanhagen*, 181 USPQ 46 (CCPA 1974):

Any assertion by the Patent Office that the enabling disclosure is not commensurate in scope with the protection sought must be supported by evidence or reasoning substantiating the doubt so expressed. 181 USPQ at 47.

Such a standard must be applied with great care when the Examiner's conjecture is contrary to the teachings of the specification.

As noted above, claims 29-52 have been canceled. As to new claims 53-77, applicants believe that the rejection fails to satisfy its burden in showing that the present application is not enabling for the scope of the current claims.

Indeed, the claims have been amended to recite TIAs instead of any and all types of metabolites. Furthermore, the claims further characterize the AP2-domain transcription factor and recite nucleotide sequences. Claims have also been added to select a number of enzymes that are shown to be under control of

the AP2-domain transcription factor as set forth in the present specification at page 29, lines 10-15. Claims 64-65 and 77 further characterize the taxonomic classification of the plant cell.

Thus, claims 64-65 and 77 are not directed to any and all types of plants. Rather, claims 64-65 and 77 recite the family, order, genus, and/or species of the recited plant/plant cell of the claims.

As a result, applicants believe that the Office Action fails to satisfy its burden in showing that the recited embodiments directed to the type of TIA, plant type, AP2-domain transcription factor and nucleotide sequence are not enabled by the present disclosure.

Claim 48 was rejected under 35 USC 101 for allegedly being directed to non-statutory subject matter. This rejection is respectfully traversed.

As noted above, claim 48 has been canceled. While claims 70 and 71 are directed to nucleic acids, the nucleic acids are recited in terms of being "isolated". Thus, applicants believe the present amendment obviates this rejection.

Claim 48 was rejected under 35 USC 102(b) as allegedly being anticipated by M. OHME-TAKAGI. Claims 25-36 and 48 were rejected under 35 USC 102(e) as allegedly being anticipated by MARTIN et al. Applicants believe the present amendment obviates this rejection.

As noted above, the new claims are directed to an AP2-domain having an amino acid sequence with at least 80% amino acid and ending with SEQ ID NO:6, or an AP2-domain comprising SEQ ID NO:6. As a result, applicants believe that the cited publications do not anticipate the claimed invention.

Claims 25, 26-36 and 48 were rejected under 35 USC 112, second paragraph, for allegedly being indefinite. This rejection is respectfully traversed.

In imposing the rejection, the Official Action alleged that the phrase "involved in" and "an AP2-domain of SEQ ID NO:6" were indefinite. As to the phrase "an AP2-domain of SEQ ID NO:6", applicants note that this phrase is not recited in the new claims. Indeed, applicants note that the new claims have been drafted in a manner so as to ensure that the recitation directed to SEQ ID NO:6 is definite to one of ordinary skill in the art.

As to the phrase "involved in", applicants believe that while the phrase may be broad, the phrase is definite to one of ordinary skill in the art. Indeed, the Office Action acknowledges that a gene may be "involved in" the synthesis of a metabolite precursor, or that the AP2-domain transcription factor may be "involved in" the response of the plant cells to a jasmonate in several ways. However, in each instance, the Official Action provides several manners in which the phrase could be used by one skilled in the art. Thus, applicants believe that the term is definite.

Thus, applicants believe that the claimed invention is definite to one of ordinary skill in the art.

In view of the present amendment and foregoing Remarks, therefore, applicants believe that the present application is in condition for allowance at the time of the next Official Action. Allowance and passage to issue on that basis is respectfully requested.

Charge the fee of \$50 for the one additional claim of any type added herewith to deposit account No. 25-0120.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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